

L7 ANSWER 9 OF 130 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:763706 CAPLUS

DOCUMENT NUMBER: 134:131904

TITLE: Investigation on cationic ring-opening polymerization of 1,5,7,11-tetraoxaspiro [5,5] undecane in the presence of low molecular weight tetraols

AUTHOR(S): Guo, Y.-M.; Zou, Y.-F.; Pan, C.-Y.

CORPORATE SOURCE: Department of Polymer Science and Engineering, University of Science and Technology of China, Anhui, Hefei, 230026, Peop. Rep. China

SOURCE: Polymer (2000), Volume Date 2001, 42(4), 1337-1344  
CODEN: POLMAG; ISSN: 0032-3861

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A four-armed tetraol, poly(1,5,7,11-tetraoxaspiro-[5,5]-undecane) tetraol (poly(TOSU)), was prepd. by the cationic ring-opening polymn. of TOSU using BF<sub>3</sub>.cntdot.OEt<sub>2</sub> as initiator in the presence of 6,6-bis(5-hydroxy-2-oxapentyl)-4,8-dioxaundecanediol-1,11 [BHDU] chain transfer agent. The structure of poly(TOSU) was characterized by <sup>1</sup>H, <sup>13</sup>C NMR and FTIR spectra. GPC curves showed that the polymer has two fractions of high and low mol. wts.; however, each had a relatively narrow mol. wt. distribution. The mol. wt. of the polycarbonate tetraols was controlled by the molar ratio of TOSU consumed to initial BHDU. The mechanism of the ring opening polymn. and chain transfer is outlined.

IT 42954-97-2P, 1,5,7,11-Tetraoxaspiro-[5,5]-undecane homopolymer  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(mechanism of cationic ring-opening polymn. of tetraoxaspiroundecane in presence of tetraol producing four-arm star polymers)

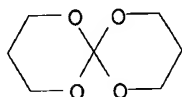
RN 42954-97-2 CAPLUS

CN 1,5,7,11-Tetraoxaspiro[5.5]undecane, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 24472-02-4

CMF C7 H12 O4



REFERENCE COUNT:

18

THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 56 OF 130 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1991:644063 CAPLUS  
DOCUMENT NUMBER: 115:244063  
TITLE: Photoresist compositions for fine patterning  
INVENTOR(S): Oie, Masayuki; Kawada, Masaji; Yamada, Takamasa  
PATENT ASSIGNEE(S): Nippon Zeon Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03107163	A2	19910507	JP 1989-243926	19890920

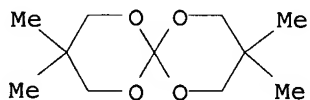
PRIORITY APPLN. INFO.: JP 1989-243926 19890920

AB The title compns. contain: (a) alkali-sol. phenolic resins, and (b) spiroorthocarbonates. These compns. suitable for patterning using short-wavelength radiations provide excellent performance for fine patterning. Thus, a soln. contg. m-cresol-p-cresol novolak 100, 2,4-bis(trichloro methyl)-6-phenyl-s-triazine 2, I 23, and F-contg. surfactant 0.01 parts in Et 2-methoxypropionate was applied on Si wafer and prebaked to form a 1.0-.mu.m-thick resist layer. Exposure to far UV and development with 2.38% Me4NOH gave pos. high-contrast pattern with 0.94-.mu.m thickness.

IT 65849-85-6 100855-04-7  
RL: USES (Uses)  
(pos.-working photoresists contg., for short-wavelength radiations)

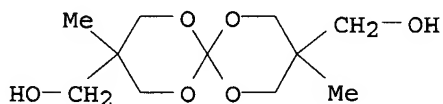
RN 65849-85-6 CAPLUS

CN 1,5,7,11-Tetraoxaspiro[5.5]undecane, 3,3,9,9-tetramethyl- (9CI) (CA INDEX NAME)



RN 100855-04-7 CAPLUS

CN 1,5,7,11-Tetraoxaspiro[5.5]undecane-3,9-dimethanol, 3,9-dimethyl- (9CI)  
(CA INDEX NAME)



L7 ANSWER 32 OF 130 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:25409 CAPLUS  
DOCUMENT NUMBER: 128:128758  
TITLE: Polymerizable composition containing onium borate  
initiator and its cured materials  
INVENTOR(S): Toba, Yasumasa  
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10001507	A2	19980106	JP 1996-155066	19960617
PRIORITY APPLN. INFO.:			JP 1996-155066	19960617
OTHER SOURCE(S):			MARPAT 128:128758	

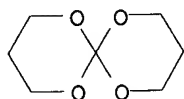
AB Title compn., useful for molded plastics, sealants, inks, coatings, resists, etc., contains (A) a polymn. initiator comprising [BYmZn]- (Y = F, Cl; Z = Ph substituted by .gtoreq.2 electron-withdrawing groups selected from F, cyano, NO<sub>2</sub>, and CF<sub>3</sub>; m = 0-3; n = 1-4; m + n = 4), (B) a sensitizer, and (C) acid-curable compd. The initiator shows high sensitivity and good soly. to resins and effectively generate acids, which induce hardening of (C). Thus, (A) diphenyliodonium tetrakis(pentafluorophenyl)borate 3, (B) anthracene 0.5, and (C) ERL 4221 (3,4-epoxycyclohexylmethyl 3,4-epoxycyclohexanecarboxylate) 100 parts were blended, coated on Al plate, and irradiated with UV to give tack-free cured film.

IT 42954-97-2P, 1,5,7,11-Tetraoxaspiro(5,5)undecane homopolymer  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(polymerizable compns. contg. onium borate initiators, sensitizers, and acid-curable compds.)

RN 42954-97-2 CAPLUS  
CN 1,5,7,11-Tetraoxaspiro[5.5]undecane, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 24472-02-4  
CMF C7 H12 O4



L7 ANSWER 33 OF 130 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:8664 CAPLUS  
DOCUMENT NUMBER: 128:115380  
TITLE: Sulfonium complex polymerization initiators, initiator compositions and polymerizable compositions containing the same, and their cured products  
INVENTOR(S): Toba, Yasumasa  
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 31 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09328506	A2	19971222	JP 1996-146877	19960610
			JP 1996-146877	19960610

PRIORITY APPLN. INFO.:

OTHER SOURCE(S): MARPAT 128:115380

AB The sulfonium complex polymn. initiators comprise bis(2-hydroxyethyl) sulfonium cations and nonnucleophilic anions and their compns. contain sensitizers. The polymerizable compns. contain the initiator compns. and acid-curable or radically polymerizable compds. Application to inks, photoresists, adhesives, etc., is indicated. Thus, EtOAc soln. of 5.00 parts PhCH<sub>2</sub>Br and 3.57 parts 2,2'-thiodiethanol were kept at room temp. for 5 days, filtered, and dried to give 4.59 parts bis(2-hydroxyethyl)benzylsulfonium bromide, 5.00 parts of which was treated with 3.32 parts Ag tetrafluoroborate in acetonitrile at room temp., filtered, pptd. with di-Et ether, and crystd. to give 3.25 parts bis(2-hydroxyethyl)benzylsulfonium tetrafluoroborate (I). A compn. comprising 3 parts I and 100 parts pentaerythritol triacrylate was applied onto Al plate and exposed to UV to give a tack-free coating without odor.

IT 42954-97-2P, 1,5,7,11-Tetraoxaspiro(5,5)undecane homopolymer  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (sulfonium complex polymn. initiators, its compns., and curable compns. thereof)

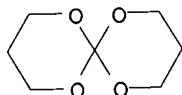
RN 42954-97-2 CAPLUS

CN 1,5,7,11-Tetraoxaspiro[5.5]undecane, homopolymer (9CI) (CA INDEX NAME)

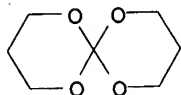
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CRN 24472-02-4

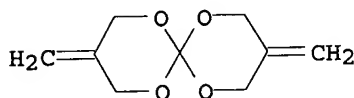
CMF C7 H12 O4



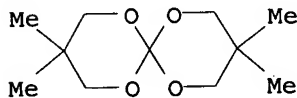
L7 ANSWER 65 OF 130 CAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1990:497535 CAPLUS  
 DOCUMENT NUMBER: 113:97535  
 TITLE: A new approach to spiroorthocarbonates and new orthocarbonic acid derivatives  
 AUTHOR(S): Mues, Peter; Buysch, Hans Josef  
 CORPORATE SOURCE: Zent. Forsch., Bayer A.-G., Krefeld-Uerdingen, D-4150, Germany  
 SOURCE: Synthesis (1990), (3), 249-52  
 CODEN: SYNTBF; ISSN: 0039-7881  
 DOCUMENT TYPE: Journal  
 LANGUAGE: German  
 OTHER SOURCE(S): CASREACT 113:97535  
 AB Simple processes have been developed, which give in good or excellent yields new diphenoxyalkanedioldioxymethanes, sym. and unsym. spiroorthocarbonates, spirocyclic orthothiocarbamic acid esters, and acetals of urea by successive or simultaneous substitution of chloro and phenoxy groups contained in dichlorodiphenoxymethane.  
 IT 24472-02-4P, 1,5,7,11-Tetraoxaspiro[5.5]undecane  
 55849-58-6P 65849-85-6P 96837-21-7P  
 128773-26-2P 128773-27-3P  
 RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)  
 RN 24472-02-4 CAPLUS  
 CN 1,5,7,11-Tetraoxaspiro[5.5]undecane (9CI) (CA INDEX NAME)



RN 55849-58-6 CAPLUS  
 CN 1,5,7,11-Tetraoxaspiro[5.5]undecane, 3,9-bis(methylene)- (9CI) (CA INDEX NAME)

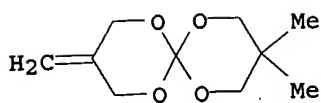


RN 65849-85-6 CAPLUS  
 CN 1,5,7,11-Tetraoxaspiro[5.5]undecane, 3,3,9,9-tetramethyl- (9CI) (CA INDEX NAME)

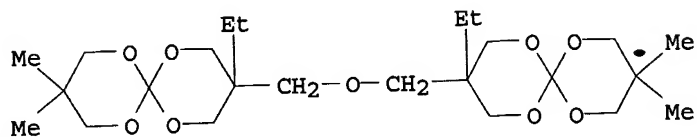


RN 96837-21-7 CAPLUS  
 CN 1,5,7,11-Tetraoxaspiro[5.5]undecane, 3,3-dimethyl-9-methylene- (9CI) (CA INDEX NAME)

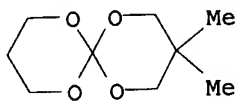
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RN 128773-26-2 CAPLUS  
 CN 1,5,7,11-Tetraoxaspiro[5.5]undecane, 3,3'-[oxybis(methylene)]bis[3-ethyl-9,9-dimethyl- (9CI) (CA INDEX NAME)



RN 128773-27-3 CAPLUS  
 CN 1,5,7,11-Tetraoxaspiro[5.5]undecane, 3,3'-bis(ethyl)-9,9'-bis(methylene)- (9CI) (CA INDEX NAME)



L7 ANSWER 29 OF 130 CAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1998:259490 CAPLUS  
 DOCUMENT NUMBER: 129:19721  
 TITLE: Adhesives for catheter tubes to prep. catheters  
 INVENTOR(S): Endo, Takeshi; Mera, Hiroshi  
 PATENT ASSIGNEE(S): Terumo Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10108906	A2	19980428	JP 1996-267497	19961008
			JP 1996-267497	19961008

PRIORITY APPLN. INFO.:  
 AB In prepg. catheters from catheter tubes using e.g. UV hardenable adhesives, the adhesives show vol. shrinkage of -3 to 8% during hardening and have viscosity .ltoreq. 10 P prior to hardening to improve the prep. catheter quality.  
 IT 207603-37-0  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (adhesives for catheter tubes to prep. catheters)  
 RN 207603-37-0 CAPLUS  
 CN 1,5,7,11-Tetraoxaspiro[5.5]undecane, 3-methyl- (9CI) (CA INDEX NAME)

